

**REMARKS**

This Application has been carefully reviewed in light of the Office Action mailed July 16, 2003 (the "Office Action"). The Examiner rejects Claims 1-6, 10, 11 and 16-23. In order to advance prosecution of this case, Applicant cancels Claims 1-7, 10-11, and 14-15 without prejudice or disclaimer and adds Claims 24-30. Applicant respectfully requests reconsideration and favorable action in this case.

**Section 102 Rejections**

The Office Action rejects Claims 1, 2, 4, 5, 10, 11 and 16-22 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,574,018 to Handelman ("*Handelman*"). Applicant respectfully traverses these rejections for the reasons discussed below.

To anticipate a claim, each and every limitation must be found in a reference. In addition, "[t]he identical invention must be shown in as complete detail as is contained in the ... claims" and "[t]he elements must be arranged as required by the claim." *Richardson v. Suzuki Motor Co.*, 9 USPQ 2d 1913, 1920 (Fed. Cir. 1989); *In re Bond*, 15 USPQ 2d 1566 (Fed. Cir. 1990); MPEP § 2131 (*emphasis added*).

Claim 16 recites increasing a spectrum width of a first optical channel space by at least an amount equal to a spectrum width of a second optical channel space to create a new optical channel space. The Office Action suggests that *Handelman* discloses these elements. *See* Office Action, pages 3-4. *Handelman* discloses the combining of converted optical signals with non-converted optical signals to form combined optical signals to be transmitted in a combined form to an end node. *See Handelman*, col. 3, lines 31-34 and col. 17, lines 14-19. The conversion is performed by wavelength converter unit 150, and the combination of optical signals is performed by controller 120. *See id.*, col. 15, lines 62-67 and col. 16, lines 47-52. *Handelman* thus discloses combining optical signals but makes no mention of increasing spectrum width of optical channel spaces, let alone creating a new channel space.

Moreover, the combined optical signals may be produced only if a resultant data rate on each corresponding channel wavelength does not exceed a channel data rate threshold.

*See Handelman*, col. 17, lines 20-23. This disclosure specifically teaches away from increasing spectrum width to create a new channel space because *Handelman* eliminates the possibility of producing combined optical signals if a resultant data rate on each corresponding channel wavelength exceeds a channel data rate threshold. If *Handelman* even contemplated increasing spectrum width of a first channel space to create a new channel space then *Handelman's* discussion would not be limited by corresponding channel wavelengths, as channel wavelengths could be increased to be able to carry the higher data rates of the combined signals.

Therefore, for at least the reasons stated above, Applicants respectfully submit that Claim 16 is patentable over the cited art and request that the rejection of Claim 16 be withdrawn.

Claims 17 and 18 depend from Claim 16 and therefore include all elements of Claim 16. Applicants thus respectfully request that the rejection of Claims 17 and 18 be withdrawn because, as discussed above, *Handelman* does not disclose, teach or suggest every element of Claim 16.

Moreover, Claim 17 recites "wherein increasing a spectrum width of a first optical channel space comprises tuning a filter associated with the first optical channel space to a wider passband." The Office Action cites portions of *Handelman* disclosing tunable bandpass filter 130 of limiting apparatus 110 as disclosing these elements of Claim 17. *See* Office Action, page 4; *Handelman*, col. 14, lines 1-6 and col. 14, lines 29-34. Bandpass filter 130 of *Handelman*, however, merely limits the wavelengths transmitted to end node 25. *See Handelman*, col. 13, lines 50-60. Bandpass filter 130 does not perform, and bears no relation to, combining non-converted and converted wavelengths which the Office Action cites as disclosing increasing a spectrum width of a first optical channel space to create a new optical channel space. *See* Office Action, page 3. Therefore, *Handelman* does not disclose, teach or suggest tuning a filter associated with the first optical channel space to a wider passband to increase a spectrum width of a first optical channel space to create a new channel space.

Thus, for at least this additional reason, Applicants respectfully request allowance of Claim 17.

Claim 19 recites "a tunable filter operable to increase the second spectrum width of the second optical channel space by at least an amount equal to the first spectrum width to create a new optical channel space having a third spectrum width, the new optical channel space operable to carry a signal at a bit rate requiring the third spectrum width." The portions of *Handelman* cited by the Office Action disclose transferring data from one channel wavelength carrying data at one data rate to another channel wavelength carrying data at another data rate to equalize the data rates. *See* Office Action, page 4; *Handelman*, col. 25, lines 41-47 and col. 26, lines 6-13. This merely discloses modification of "an arrangement of data" carried over channel wavelengths. *See Handelman*, col. 21, lines 55-61. Nowhere does *Handelman* disclose increasing a spectrum width of an optical channel space to create a new optical channel space.

Moreover, the transferring of data of *Handelman* cited in the Office Action is performed by switching in an optical cross-connect fabric 410. *See Handelman*, col. 25, lines 60-64. *Handelman* does not disclose a tunable filter, as recited in Claim 19, to increase the second spectrum width of the second optical channel space by at least an amount equal to the first spectrum width to create a new optical channel space having a third spectrum width, the new optical channel space operable to carry a signal at a bit rate requiring the third spectrum width.

Therefore, for at least the reasons stated above, Applicants respectfully submit that Claim 19 is patentable over the cited art and request that the rejection of Claim 19 be withdrawn.

Claim 20 recites "dividing a first spectrum width of a first optical channel space to create a second optical channel space having a second spectrum width and a third optical channel space having a third spectrum width." The Office Action cites portions of *Handelman* which disclose equalizing data rates carried over a group of channel wavelengths

by transferring data from at least a first channel wavelength of the group which carries data at a first data rate to at least a second channel wavelength in the group which carries data at a second data rate. *See Handelman*, col. 25, lines 47-57. As discussed above, such transfer is accomplished via a cross-connect fabric that switches a portion of the data carried over the at least a first channel wavelength to the at least a second channel wavelength. *See id.*, col. 25, lines 58-63. As an example, data may be transferred from two channel wavelengths carrying data at 20 Gb/s to two channel wavelengths carrying data at 2.5 Gb/s until all four such channel wavelengths carry data at 11.25 Gb/s. Thus, while *Handelman* discloses transferring data from one channel wavelength to another through a switching mechanism, *Handelman* does not disclose dividing spectrum widths of any channel spaces to create other channel spaces having smaller respective spectrum widths.

Therefore, for at least the reasons stated above, Applicants respectfully submit that Claim 20 is patentable over the cited art and request that the rejection of Claim 20 be withdrawn.

Claim 21 depends from Claim 20 and therefore includes all elements of Claim 20. Applicants thus respectfully request that the rejection of Claim 21 be withdrawn because, as discussed above, *Handelman* does not disclose, teach or suggest every element of Claim 20.

Moreover, Claim 21 recites "tuning a filter of the first optical channel space to a narrower passband" to divide a first spectrum width of a first optical channel space. While the portion of *Handelman* cited in the Office Action in the rejection of Claim 21 discloses a tunable filter, such disclosure is in the context of a limiting apparatus of *Handelman* and merely discusses transmitting selected channel wavelengths for passing through the limiting apparatus. *See Handelman*, Figure 2 and col. 13, lines 50-62. The device of *Handelman* which the Office Action contends (in the rejection of Claim 21 discussed above) divides a first spectrum width of a first optical channel space is optical cross-connect fabric 410, a switching mechanism. *See Office Action* ¶ 5, pages 4-5 and *Handelman*, col. 25, lines 41-64. *Handelman* does not disclose, teach or suggest tuning a filter of a first optical channel space to a narrower passband to divide a first spectrum width of the first optical channel space.

Thus, for at least this additional reason, Applicants respectfully request allowance of Claim 21.

**Section 103 Rejections**

The Office Action rejects Claim 23 as unpatentable over *Handelman*. Applicant respectfully traverses this rejection for the reasons discussed below.

In order to establish a prima facie case of obviousness of a claimed invention, all claim limitations must be taught or suggested by the prior art. *See In re Royka*, 409 F.2d 981 (CCPA 1974).

Claim 23 recites a plurality of passband filters, each "operable to vary the initial spectrum width of at least one of the initial channels to form at least one new channel that utilizes a channel spacing of at least one of the initial channels." The Office Action states that it would have been obvious to one having ordinary skill in the art to have included a plurality of passband filters, since it has been held that mere duplication of the essential working part of a device involves only routine skill in the art. *See* Office Action, page 6. The Office Action cites *St. Regis Paper Co. v. Bemis Co.*, 549 F.2d, 833, 193 USPQ 8 (7th Cir. 1977) for support. However, mere duplication of the passband filter of *Handelman* would not anticipate the elements of Claim 23. For example, Claim 23 recites a plurality of passband filters each operable to vary the initial spectrum width of at least one of the initial channels to form at least one new channel that utilizes a channel spacing of at least one of the initial channels. Mere duplication of the filter of *Handelman* would not accomplish this element because there is no disclosure in *Handelman* of varying a spectrum width of an initial channel to create a new channel to utilize a channel spacing of the initial channel. Moreover, there is no cited suggestion or motivation in *Handelman* or any other cited art to duplicate the passband filters. Furthermore, the Board of Patent Appeals and Interferences has indicated that *St. Regis* is "heavily fact dependent" in reversing a previous over-reliance upon the thinking processes of the *St. Regis* court. *See Ex Parte Yutaka Urino and Tomoki Saito*, 1996 WL 1748823 (Bd.Pat.App & Interf.); *see also Ex Parte Edward H. Nortrup*, 1996

WL 1749314 (Bd.Pat.App & Interf.). Applicants thus respectfully submit that Claim 23 is nonobvious over the disclosure of *Handelman* and request allowance of Claim 23.

**New Claims**

Applicants add new Claims 24-30. Claims 24-30 contain no new matter and are fully supported by the specification as filed. Applicants respectfully submit that Claims 24-30 are allowable over the prior art, because the prior art does not disclose, teach or suggest each element of the claims from which new Claims 24-30 depend. Moreover, the prior art does not disclose, teach or suggest the added elements of new Claims 24-30. Therefore, Applicant respectfully requests allowance of Claims 24-30.

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**CONCLUSIONS**

Applicant has made an earnest attempt to place this case in condition for allowance. For the foregoing reasons, and for other reasons clearly apparent, Applicant respectfully requests full allowance of all pending claims.

If the present application is not allowed and/or if one or more of the rejections is maintained, Applicant hereby requests a telephone conference with the Examiner and further requests that the Examiner contact the undersigned attorney to schedule the telephone conference.

No fee is believed to be due. However, the Commissioner is hereby authorized to charge any fees to Deposit Account No. 02-0384 of Baker Botts L.L.P.

Respectfully submitted,

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Date: October 16, 2003

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